

CLAIMS:

1. (Withdrawn) A diagnostic tool for use in diagnosing diseases, said tool comprising detection means for detecting a presence of an array of markers indicative of a specific disease.
2. (Withdrawn) The diagnostic tool according to claim 1, wherein the disease is selected from the group consisting essentially of cancer, infectious diseases, and auto-immune diseases.
3. (Withdrawn) The diagnostic tool according to claim 1, wherein said detection means is selected from the group consisting essentially of an assay, a slide, and a filter combination.
4. (Withdrawn) The diagnostic tool according to claim 1, wherein said detection means is a two-color detection system.
5. (Withdrawn) A combination of markers for diseases, said array comprising at least two markers for disease.
6. (Withdrawn) The combination of markers according to claim 5, wherein said combination is a marker for stages of cancer.
7. (Currently amended) A method of detecting and identifying an combination array of markers indicative of disease stage, said method comprising the steps of:

differentially biopanning sera obtained from a normal individual and patients with the disease against phage display libraries expressing cDNA of genes expressed by diseased cells to obtain epitope-bearing clones displaying reactivity to antibodies present in sera of patients with disease but not in sera of normal individuals to array for analysis; and

identifying the epitope bearing clones that are ~~present only in~~ specific to the disease stage by classifying the epitope bearing clones based upon reactivity with serum antibodies to determine the markers to be included in the array based upon antibody reactivity values of the clones, thereby detecting an array of markers of disease.

8. (Currently amended) The method according to claim 7, wherein said ~~determining~~ analyzing step includes using a computer to automatically identify the epitope bearing clones that are present only in the disease stage ~~analyze results of said biopanning step~~.

9. (Canceled).

10. (Withdrawn) A kit for screening for the presence of disease markers, said kit comprising a diagnostic tool according to claim 1 and carrying means for carrying and storing said diagnostic tool.

11. (Withdrawn) Epitopes found using the method of claim 7.

12. (Withdrawn) A method of detecting disease by:
analyzing a pool of antibodies from a series of patients all having a particular disease as compared to non-disease controls;
detecting an of increase of antibodies as non-disease control; and
inspecting sera from a patient of unknown disease state to match with patient antibody array pattern of detection to diagnose the specific disease of the patient.

13. (Withdrawn) A database comprising the epitopes of claim 11.

14. (Withdrawn) A method for selecting indicative epitopes indicative of disease for use in disease screening using labeled phage bearing markers of disease and antibody reactions.

15. (Withdrawn) A method for processing data in order to eliminate artifacts and normalize the data with respect to various sources of variance.

16. (Withdrawn) A tool for interpreting results of a disease screening, said tool comprising an computer program for analyzing the results of screens.

17. (Withdrawn) A method of creating an array of markers for diagnosing presence of cancer or determining cancer stage, said method comprising the steps of:

selectively biopanning sera obtained from a patient to obtain an array for analysis; and

detecting markers which are present only in the sera of patients with a specific disease thereby creating an array for use in diagnosing disease.

18. (Withdrawn) The method according to claim 17, wherein said biopanning step includes subtractively biopanning the sera.

19. (Withdrawn) A biochip for detecting the presence of a microbe in a patient's sera, said microchip comprising:

a biochip and detection means contained within the microchip for detecting microbes in a patient's sera.